



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,042	11/24/2003	ChenKang David Chen	Halliburton-136	5008
7590	09/16/2005			
Alan C. Bryson Browning Bushman P.C. Suite 1800 5718 Westheimer Houston, TX 77057			EXAMINER NEUDER, WILLIAM P	
			ART UNIT 3672	PAPER NUMBER
DATE MAILED: 09/16/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,042

Applicant(s)

CHEN ET AL.

Examiner

William P. Neuder

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-18, 20-25, 27-32 and 34 is/are rejected.
- 7) ☒ Claim(s) 4, 11, 19, 26 and 33 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/4/04, 5/17/04, 2/17/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3,5-8,13-16,20,22-25 and 27-30 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,15,16,29-31,40 and 41 of copending Application No. 10/421135.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are substantially identical. For example, claim 1 of the instant application differs from claim 1 of 10/421,135 in calling for a method of drilling a deviated portion of a borehole. While claim 1 of 10/421,135 does not call for a method of drilling a deviated portion of a borehole, it does set forth the bottom hole assembly with a downhole motor and the shaft having a bend at a selected bend angle. It is obvious that the method set forth in claim 1 of 10/421,135 is for drilling a deviated portion of a borehole. Also, claim 1 of the instant application calls for radially expanding the tubular, while claim 1 of 10/421,135 just calls for expanding. Again it is believed

inherent or obvious that the tubular is radially expanded when the tubular is expanded outwardly into contact with the drilled hole.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 12, 21 and 34 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,5,6,15,16,29-31,40 and 41 of copending Application No. 10/421,135 in view of Wylie et al 2004/1049431. These claims add the limitations that the tubular be placed 5000 feet into the well. Wylie et al discloses placing the tubular at least 16,00 feet. It would have been obvious to place the tubular 5000 feet deep when Wylie teaches that the tubular can be placed 16,000 feet.

This is a provisional obviousness-type double patenting rejection.

Claims 9,10,17,18,31 and 32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,5,6,15,16,29-31,40 and 41 of copending Application No. 10/421,135 in view of Anderton et al 2004/0074640. Anderton teaches that the run-in diameter to wall thickness ratio be on the order of 20 to 30. It would have been considered obvious to have the diameter to wall thickness be at least 20 in the claims of 10/421,135 in view of Anderton's teaching of forming the diameter to wall thickness being at least 20 for structural integrity. As to the specific expression set forth in claim 9, it is considered inherent in Anderton that he meets this expression since his ratio is at least 20 to 30.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5,6,12,13,24,25,27,28,31,32 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Wylie et al

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Wylie et al discloses an apparatus and a method of drilling a deviated portion of a wellbore (see figures 10 and 11) by positioning a bottom hole assembly including a motor with a shaft having an upper section with a central rotational axis and a lower central rotational axis offset at a bend having a selected bend angle downhole. The drill bit has a bit face and a gauge section. The bit face defines a bit cutting diameter. The gauge section having an axial length of at least 60 per cent of the bit cutting diameter (see for example par. 257). The bit and gauge section are rotated to drill a portion of

Art Unit: 3672

the hole. An expandable tubular is positioned within the hole and radially expanded to an expanded diameter greater than the run-in diameter. As to claim 2, the tubular is expanded into contact with the open-hole when being used in open-hole wells. As to claims 3 and 25, a positive displacement motor or rotary steering motor can be part of the bottom hole assembly. As to claims 5,6,27 and 28, the gauge section has an axial length of at least 75 per cent and at least 50 per cent of the axial length has a uniform diameter cylindrical bearing surface (see par. 257). As to claims 12 and 34, the deviated portion can be drilled up to 16,000 feet (see par. 165). The expandable member is placed at the end of the drilled or deviated portion. As to claim 13, the bit is rotated by pumping fluid through the downhole motor or rotating the string from the surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9,10,31 and 32 are rejected under 35 U.S.C. 103(a) as being obvious over Wylie et al (applied above) in view of Anderton et al (applied above).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

Art Unit: 3672

that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2). Wylie is silent as to the diameter to wall thickness ratio. Anderton discloses use of an expandable tubular having a diameter to wall thickness ratio of 20 to 30. It would have been considered obvious to provide the expandable tubular of Wylie et al with a diameter to wall thickness ratio of at least 20 as taught by Anderton et al in view of Anderton's teaching that this ratio increases structural integrity. As to the expression of the ratio as in claim 9, it is believed that the ratio of 20 to 30 set forth in Anderton inherently meets this expression.

Claims 1-3,5-8,13-16,20,22-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boulton 6,269,892 in view of Simpson 6,457,532.

Boulton discloses (see figure 1) a method and apparatus for drilling a deviated portion of a wellbore utilizing a bottom hole assembly including a downhole motor 12 having an upper section with an upper central rotational axis and a lower bearing section with a lower axis offset at a selected bend angle from the upper axis by a bend. The bottom hole assembly including a bit 28 having a gauge section 24 above the bit. The gauge section having a uniform diameter bearing surface thereon along an axial length of at least about 60 per cent of the cutting diameter. The bit is rotated by the bottom hole assembly to drill the borehole. Boulton does not teach expanding the tubular. Simpson discloses inserting a tubular with a run-in internal diameter at a desired depth and then using an expansion tool for expanding the downhole tubular in order to line the borehole (see col. 1, lines 11-20). It would have been considered

Art Unit: 3672

obvious to modify Boulton to include the expandable tubular and expander of Simpson since it would be advantageous to connect the newly installed tubular with the previously installed tubular. As to claim 2, the tubular will be expanded radially to be in contact with the previous tubular or open-hole. As to claims 4,20 and 25, Boulton discloses a rotary displacement steering assembly and a positive displacement motor 12. As to claims 5 and 27, Boulton teaches that the gauge section has an axial length of at least 75 per cent of the cutting diameter (see col. 3, lines 19-35). As to claims 6,15 and 28, Boulton discloses that the gauge section has a bearing surface (LG) along at least 50 per cent of the axial length of the gauge section. As to claims 7,8,14,16,29 and 30, Boulton does not disclose the expansion rate being less than 10 per cent. However, Boulton does teach drilling with a long gauge bit and a short bend to bit face improves the hole quality which allows a larger casing to be used and therefore less expansion of the casing is required. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (see *In re Boesch*, 617 F.2d 272,205 USPQ215 (CCPA 1980)). It would have been considered obvious to modify the system of Boulton to have an expansion rate less than 10 per cent because of better hole quality and discovering an optimum value of a result effective variable involves only routine skill in the art. As to claims 13 and 22, the bit is rotated by pumping fluid down through the downhole motor or rotating at the surface.

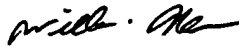
Allowable Subject Matter

Claims 4,11,19,26 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Neuder whose telephone number is 571-272-7032. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William P Neuder
Primary Examiner
Art Unit 3672

W.P.N.